WHIRRAKEE

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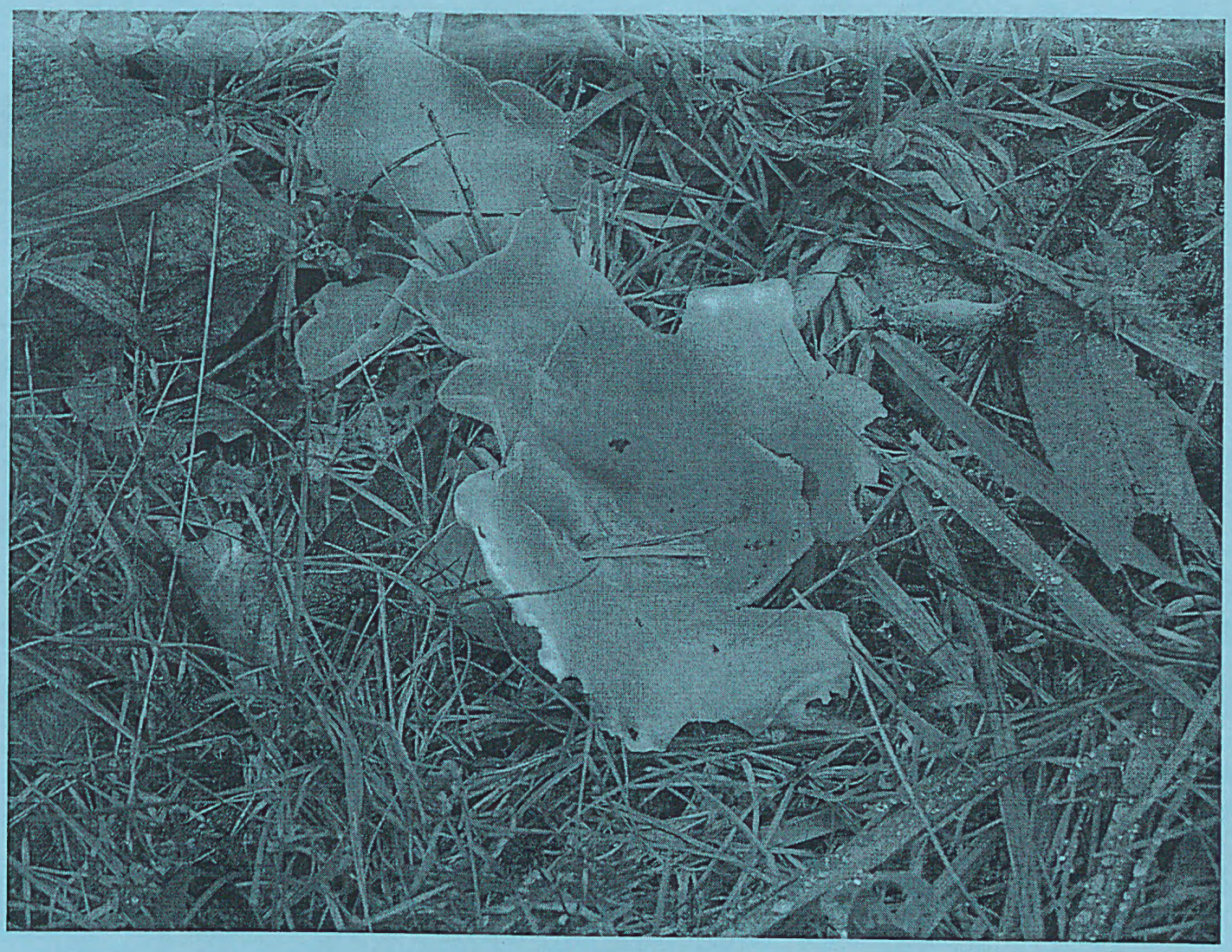

MONTHLY NEWSLETTER OF THE BENDIGO FIELD NATURALISTS CLUB

Bendigo Field Naturalists Club Inc.
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Membership of the Bendigo Field Naturalists Club is open to all those interested in Natural History. The subscription rates are: Single $34; Family $40; Concession: Single $28.50; Family $34. *Whirrakee* subscription only is $34.

General meetings are held on the second Wednesday of each month. The venue for General meetings is the Golden Square Senior Citizens Building, Old High Street, Golden Square. The invited speaker at general meetings starts at 8:00pm and meetings conclude with supper.
If a workshop is held prior to the meeting, it will be advertised and it usually starts at 7.00pm.
The Annual Meeting is held in September.

Committee meetings are held on the third Wednesday of each month at 7:30pm. Members of the Committee are the Office Bearer listed above and the following members: Matthew Comer, Bill Holsworth, Darren White, Bob Ruddick, Rod Orr, Jan Orr, Peter Ellis, Ben Goonan, Richard Goonan, Anthony Sheean, Liz Graham

Excursions are conducted regularly and are advertised on the diary page of the *Whirrakee*. The assembly point for excursions is the Golden Square Senior Citizens Building, unless otherwise specified. In addition to local excursions, campouts are held several times each year, usually coinciding with long weekends or holiday periods.

The Bendigo Field Naturalists Club has one active group that meets regularly (the Fauna Study Group) and other groups that meet at irregular intervals.

Fauna Study Group: meets on the fourth Wednesday of the month at 7:30pm in the Golden Square Senior Citizens Building.
Chairman: John Burtonclay, Fadersons Lane, Mandurang (5439 5710)
Secretary: Bill Holsworth, 13 Nabilla Crs., Bendigo (5443 4063)
Equipment Officer: Maurie Lewis (0407 427179)

Bird Observers Group: This group has field excursions and the occasional lecture evening. Please consult the *Whirrakee* for details. Special bird observations should be reported to Anne Bridley 5449 3479.
To propose meetings or excursions please contact Kerrie Norris 5447 8017.

Front cover photo?...see page 2.

WHIRRAKEE

Monthly Newsletter of the Bendigo Field Naturalist Club

Vol. 28, No. 7, August 2007

Whirrakee takes its name from the Whirrakee Wattle (*Acacia williamsonii*) which is virtually endemic to the Bendigo region

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Authors are responsible for the accuracy of the information they use and also for any opinions expressed in their articles. Contributions will be included as soon as possible after they are received, although articles received more than one week after the monthly General Meeting will probably be too late for inclusion in the next issue of *Whirrakee*.
Articles in *Whirrakee* may be reproduced, but permission should be obtained from the Bendigo Field Naturalists Club, and acknowledgment should be given to the author and the Club. Some back issues are still available on request.

Editor's Note
What a full and fantastic excursion program we have this spring. Congratulations to Richard, our excursion organiser! Coming up to spring, this is also a very full edition, so apologies to those authors whose contributions I had to hold over till next month for lack of room – a rare thing indeed.

A reminder for your subscription renewal is included in this edition. Please pay promptly…and could you please write to us, if you intend to discontinue your membership?

Front Page Illustration – Photographer: Richard Goonan

This photo of *Aleuria aurantiaca*, the Orange Peel Fungus, was taken on the recent fungal excursion to Blackwood. Naturally, it looks even better in colour! See page 6 for the full report.

Excursions and Short Notices

Regent Honeyeater Project – Community Planting Weekend 11-12 August
It is now the absolute eleventh hour for you to register for this activity, but John Lindner is generally a nice person, so he may let you in. Full details are available in the July *Whirrakee*. You will have to get to it.

Saturday 18th August (formerly August 11th) **– Local Vegetation Survey**
Come and participate in vegetation surveys of the local forest in areas affected by fire, or which are proposed to be burned over the next two years, as part of the current forest management practices. Assist the development of vital basic ecological trend data, which will be of immense value in years to come – a great opportunity to gain practical skills. Any volunteers, who would be willing to assist in the organization of the day, please contact Richard. Meet at the Clubrooms at 9am (car pool) and return approximately at 3pm.

September 15th Excursion – Roadside Conservation with Ben Goonan, NCCMA
Ben Goonan spoke at the April meeting regarding the work he has undertaken, surveying the roadsides of the North Central region over the past two years and developing a detailed understanding of the issues surrounding remnant vegetation on roadsides. Roadside vegetation provides an invaluable source of information regarding species distribution and associations. Providing an important resource for conservation, some of the last remaining examples of the former vegetation that once covered the landscape are found along sections of the 44,500km of roadside in the north central area. Roads cover 3% of the NCCMA region and Ben has located more than 1500 rare and threatened plant species records while surveying! Join us on a tour of some of the region's roadsides, which you will have travelled many times, not realizing you were driving past a rare or threatened species or vegetation community. The day will include stopping for short walks to examine some of the many different vegetation types such as Creekline Grassy Woodlands, and Riverine Plains Woodland communities, and other areas of interest such as small reserves. We are very lucky to have Ben again this year, last year's excursion was very highly commended by those attending. A bus is required, please book early. Bring your lunch, snacks, hat, warm clothes and jacket.
8.00am – 3.00pm – meeting at club rooms.
Cost $15.00. For further information and bookings call: 0423418815

September 22nd – Orchid Survey with Geoff Nevill (additional September excursion)
Geoff Nevill is a Threatened Species Officer with the Department of Sustainability and Environment, Epsom. Geoff's work focuses on threatened orchids and includes several species found locally. Members of the BFNC have assisted Geoff in the past, and this work was the basis for receiving the Banksia Award 2006. An important part of the recovery process is the identification and survey of likely habitat; this can often involve covering large areas to determine whether the species is present. Following the autumn rains this year and growth activity of other species (orchids and lilies); this season may be a good opportunity to locate populations. The Big Hill Range is an area that may be familiar to club members. Obviously the steep slopes and large area required to be surveyed would be difficult for one person alone. Geoff would appreciate the assistance of the BFNC with survey of the Big Hill Range in September, looking for *Caladenia concolor* (Crimson Spider Orchid). This species is known from Chewton, occurring on another part of the metamorphic aureole landform, which surrounds the Ravenswood/Mt Alexander granite, and also from Mandurang. The survey will concentrate on the lower slopes of the range, where slightly deeper soils have accumulated on less metamorphosed sedimentary bedrock. Please meet at the intersection of Diamond Hill Rd and Nankervis/South Mandurang Rd, 8:30am and, as usual, please let Richard know if you are coming.
For any excursion enquiries, ring Richard Goonan on 0423418815 or e-mail him on richardgoonan@optusnet.com.au

Friends of Cranbourne Botanic Garden-visit to Central Victoria.

The above group are planning to visit central Victoria on the weekend of the 25th and 26th of August. They have made contact with the club seeking our involvement in their visit. On the Saturday they will visit areas around Bendigo with a focus on the Whipstick and Kamarooka areas led by Roger and Gwen Elliot, well known native plant experts and authors. The group will be travelling by bus, which is likely to be full, but would welcome our club members to join them on the excursion in their own cars, and maybe contribute some local knowledge and meet some new people.

On the Saturday night the group will hear a presentation by our own local expert, Marilyn Sprague, on plants of the box-ironbark forests. We have offered for this to be held at our clubrooms and again our club members are invited to attend. On Sunday the group will travel to other localities further afield, before returning home. This should be an enjoyable weekend and a good opportunity for our club to show its hospitality to these visitors. Further details will be available soon and will be announced at the August meeting or phone Matt Comer on 0409162627.

Box-Ironbark Ecology Course

Nagambie 29 Oct - Friday 2 Nov 2007
cost: $1200 includes accommodation & meals.
Applications close 28 Sept.
Contact: Kate Stothers 5761 1572
kate.stothers@dpi.vic.gov.au

Bus trip to Cranbourne Native Botanic Gardens – Sunday 21st October

The Bendigo Native Plant Group is organising a bus on this day to the beautiful new native Botanic Garden at Cranbourne.

The cost will be $ 25.- for the bus. More details later. Please contact Ian O'Halloran if you are interested in attending (ph 54742587).

River Red Gum Forests Investigation – *Draft proposals paper for public comment* has been published and submission are due 21 Sept. 2007. Bill Holsworth will bring a copy to the August meeting, but additional copies are available in the Public Library, DSE offices and from Information Victoria 1300 366 356.

Club Garden Report

by Matthew Comer

The garden is looking better now with the rains it has received. Some club members have contributed to a couple of small working bees in recent months. We have noticed natural regeneration of some species such as the sticky everlasting, since rains have triggered them to germinate. I am planning to hold a larger working bee soon to put in a good effort on the weeds (which are also enjoying the moisture) and to top up some areas with new mulch and do some more replacement planting. The date is not yet finalised and will be announced at the next meeting. In the mean time, I am hoping to do a little weeding, if I find some spare time. I know other members do this on occasion too, and any such weeding, even if only a small amount, if you happen to be at the clubrooms in daylight, would be appreciated. Though if you are unsure which ones are the germinating natives, please find out first.

July 'Thing of the Night': Stuart Fraser 'Flowering of local eucalypts'

In the spirit of this segment, Stuart compared two local eucalypt species, *Eucalyptus tricarpa* (Red Ironbark) and *Eucalyptus microcarpa* (Grey Box). Their flowering is a very complex topic.

One of the main points was that *E. tricarpa* flowers in response to wet times, not dry times as many people think. There is, however, a considerable delay between any major rain event and the corresponding flowering.

Flowering times also vary within the geographic distribution of this species.

Grey Box also responds to rain, but its response seems even more complicated than that of Red Ironbark. Here, there is also a big delay between the rain, the setting of buds and the actual flowering. From the recent rains we have had, it might be nearly three years before the corresponding flowers will be seen.

Stuart, who seemed to have a lifetime of experience that he wanted to covey to the audience in ten minutes, knew the precise dates for when, where and why flowering and nectar are expected in the region.

There is obviously so much to tell. I do hope that Stuart will get the chance to be a main speaker at a club meeting soon, to expand on this most fascinating topic.

Peter Ellis will be the next speaker of the 'Thing of the Night'. His topic will be a surprise but a clue can be found in this edition of the *Whirrakee*.

July General Meeting: 'The importance of the Greater Bendigo National Park'
Speaker: David Major

by Sabine Wilkens

David works for Parks Victoria. He is a relative newcomer to this area and is in charge of the new and complex Greater Bendigo National Park, as well as other parks and reserves in the Northern Goldfields region.
Many of the parks he has worked at previously, had an emphasis on visitor management, but his past 13 years were spent at Hattah, where management had to be done on a landscape scale. This experience has greatly influenced David's views on management of a park like the GBNP.

The GBNP was launched in 2002. It a highly modified, fragmented park, more like a remnant landscape, as a result of a long and torturous process of modification by people.

David stressed that it is not like a traditional NP in that it does not have vast undisturbed tracts of pristine land within it.

With its approximately 17000 ha in area, but with a disproportionately long boundary, David said it presents interface issues on a scale never experienced in his working life.
There is also a vast range of community attitudes to deal with, ranging from total non-interest or dislike of the park, to heavy use and abuse, to it being highly valued and appreciated.

Reasons for why this park is special are many and varied. There are rare and significant plants and animals as well as mining and cultural history to consider. Bendigo is set in a unique environment, surrounded by forest. In this respect, David said that he felt privileged to be ranger of such a special environment.

There are five rangers working with David, so what do 'Parks' do in their role as managers?
Although there are untold specific jobs, the team is getting more and more into the landscape approach of management and in the process collaborate more and more with the CFA, the police, BRIT, clubs like the Field Nats, DSE as well as other community groups, to decide on management strategies. This is a bit of a change of attitude compared to the past, where 'Parks' often thought of themselves as being the only land managers.

Some of the more specific jobs include
- Protection from pest plants and animals,
- Fire management,
- Road and track maintenance,
- Making information available by a number of means for educational purposes,
- Sponsor the Greater Bendigo Park Ride to increase awareness of our parks,
- Promotion of our 'city in the forest', e.g. pictures on trams
- Partnership patrol with police officers to make inroads into motorbike offences,
- Building toilet blocks, bridges and boardwalks as well as for tree planting
- Running bush class rooms and working with various school cluster groups

Obviously, with such a variety of demands, priorities will have to be set.
David said that he is starting to develop a real passion for the area and that he wants to convey this passion to the public. There is no other way that people will look after and value the bush. He certainly does not want to use his time, following up illegally dumped rubbish for most of the week, but wants to see a change in community attitude., i.e. he wants to attack the problem from the other end. For the community to see this same beauty, people need to be engaged with the park.

In all of this, a landscape approach is necessary. But how can we manage a whole landscape (rather than worry about individual trees here and there)?
The overall aim of the management regime in the long term is to increase the value of the park. To know if this is being achieved, we need to be able to measure an improvement or increase in value of the park over time, so we need to be able to recognise changes – for better or worse – changes that come from the applied management regime.

Overall there are four things that are important to David as park manager, community engagement, working across the landscape, prioritising his work and being able to recognise whether management has brought about a positive change.

Some of the current issues are interface issues, tree risk, illegal dumping, trail bikes and vandalism. A management plan is a key requirement to address these. The development this plan started about 3 or 4 years ago and now, the draft management plan for Bendigo is nearly ready for release. This plan will give guidelines for the next 10 years and will set broad strategic directions.

In this plan, fire management is obviously a hot topic. David's talk only touched on it, but it dominated question time. Amongst plenty of sharp questions, David reassured us that parks are getting better at their fire policy and that they recognise the importance of pre- and post fire monitoring to see the effects of fire.

Action will speak louder than words and many club members remain to be convinced that there has been some sort of turn around in attitude to burning.
I want to thank David, for giving us this talk. It must have felt a bit scary during question time, but plenty of knowledge, experience and concerns were shared and that can only be a good thing.

Blackwood FNCV Fungi Excursion Report

by Richard Goonan

Eleven members of the Bendigo Field Naturalist Club and two other visitors from Bendigo joined about twelve of the FNCV fungi group in Blackwood on Sunday the 1st July. The recent rainfall and mild temperatures over autumn/early winter created excellent conditions for macrofungi fruiting displays. Despite the flooding in Gippsland and high rainfall in other parts of the state over the preceding week and the threat of more on the day, the weather was perfect for being out in the Central Highlands forest in the middle of winter. The strong winds of the previous week had eased leaving their mark on the landscape with many large branches and some very large trees fallen down on the side of the roads as we approached Blackwood.

Apart from a Yellow Robin perched on a wire tree guard at the car park and Brown Thornbills at the beginning of the day's walk, few birds were seen or heard. Along with the slight breeze that probably kept the birds further in the valley, most attention was on the ground and in particular, amongst the leaflitter.

The abundance of observers (30 or so people) quickly located an array of different fungi, and walked no more than 500m from the carpark. The search concentrated on a small area of Heathy Dry Forest dominated by *Eucalyptus dives*, with an understory of *Daviesia ulicifolia, Acacia mucronata var longifolia, Dillwynia ramosissima, Leptospermum continentale, Epacris impressa, Hakea*

decurrens, Grevillea spp, Hibbertia fasciculata, Exocarpus cupressiformis, Lomandra filiformis, Dianella tasmanica, Banksia marginata, with abundant *Poa sieberiana* tussocks and occasional *Pteridium esculentum,* among other species. The north/north-easterly aspect, open forest, abundant leaflitter, and other protected habitats such as amongst *Poa* tussocks, around tree bases and stumps, under or on logs and various ground surface features where litter accumulates (eg, relict mining ditches), provided a diversity and complexity of microclimates for various fungi groups. By way of contrast, only a few species were found among the section of the track under exotic pines, where a more homogeneous habitat is found including the dominant vegetation present.

The FNCV fungi group recorded 83 species for the day, an indication of the important and often overlooked contribution to biodiversity that fungi make. How often are fungi considered in biodiversity assessments such as standard flora and fauna surveys, or Habitat Hectares? Morgan (2004) was able to contribute an additional 25% to the overall species list for grasslands previously surveyed for vascular plants in south western Victoria by considering bryophytes - non-vascular plants (mosses and liverworts). Macrofungi are generally mycorrhizal and/or saprophytic, and produce visible fruiting bodies that enable field location/ identification. There are many other fungi not able to be observed in the field. A similar trend can be seen between bryophytes and macrofungi in their lack of recognition in biological surveys, yet both groups play vital roles in the function of ecosystems. A full list of the fungi found during the excursion is available from Richard, courtesy of the FNCV fungi group. Some of the many different fungi observed on the day include:

Heterodexus peziziformis (Jelly Bells) form small elongated wavy masses of yellow flesh somewhat bell-shaped, and are found on logs and sticks. *Calocera spp* form yellow spines or fingers that project from the wood mass on which they grow. Both species are often found growing near one another.

Aleuria aurantiaca is called Orange Peel Fungus for a very good reason, and could be very easily overlooked or mistaken for its name sake. The almost dish-like cups have an uneven edge, forming a small cluster on the surface of the ground. Only one patch was found on the day, in exactly the same location as the previous year.

Stereum illudens is similar to the bracket type fungi and forms brown velvet like horizontal growths on dead woody debris. Often the pink/mauve skin-like growth is found between the bark and wood surface and is far more extensive than the velvety bracket like growth on the exposed surfaces. Pat Grey pointed out that if the bluish-grey glaucose bloom can be rubbed off, this indicates another species which looks very similar *Punctularia strygosozonatum.*

The introduced species *Amanita muscaria, Lactarius deliciosus, Suillus granulatus, Suillus luteus,* and *Rhodocollybia butyracea* were found close to mature pines. *Rodocollybia* has a pale pink white cap, and white gills. The hollow stem when broken between the fingers forms long strands and is said to be cartilaginous – breaks into string like strands.

Stopharia semiglobata, as the name implies, has a cap that is domed in a half globe shape (hemispherical). This species grows on Wallaby dung, is only small (50mm height, 10mm cap width) and pale brown with a cream stem.

Lactarius eucalypti is a native species that is in the same genus as the exotic, edible *Lactarius deliciosus* that forms a mycorrhizal association with pine. The *Lactarius* group is peculiar in that they exude a milky sap when the gills and flesh are broken. This feature can be used to separate specimens from the very similar *Leucopaxillus* group. Many of the *Leucopaxillus* and *Lactarius* have a concave funnel like cap, and the gills, attached to the

stem are described as decurrent gills. *L. eucalypti* in a uniform pale fawn / brown colour, and the cap is less funnel-like than found in *Leucopaxillus* spp.

Tricholoma spp are another common group in eucalypt forest. A specimen with dark grey centre radiating to a lighter white grey rim, white gills and flat cap was found but not identified to species.

Russula persanguinaea, like many of the *Russula* group, has evenly spaced white gills and white stem (stipe) that is usually stout (10-15mm diameter). The cap is however vividly coloured (particularly when fresh), this species is red on top, fading to a deep red/ pink on the edge and toward the centre with age. *Russula lenkunya / clelandii* has a purple cap and cream/yellow gills with a pale purple (flecked) colour on the stem.

The *Cortinarius* group is well represented in eucalypt forests of Central Victoria. This large group of fungi a characterised by having adnexed gills (not attached to the stem directly), that are evenly spaced, and the upper stem often exhibits a remnant veil. *Cortinarius rotundisporus* is steely blue grey on the outside of the cap with a green/ brown centre that highlights the broad umbo (nipple-like rise in centre of cap).
Cortinarious sinapicolor is a bright yellow colour, characteristically covered in a thick clear gel-like coating, which sometimes also covers the stem. As the specimen matures this can be reduced or lost and is therefore most obvious on fresh examples. The strong dark green colour of *Cortinarius austroveneta* is unmistakable and not produced in many other species. Stem and gills are yellow. This species was formerly grouped with the *Dermocybe* genus.

Hydnum repandum is quite different to most of other fungi seen on the day. Rather than having gills underneath the cap, this species has white spine like projections arranged under the cap, often referred to as teeth. The cap is concave with slightly undulating to upturned margins and is a cream to white colour with a hint of yellow/pink.

Hypholoma australe has a small red / brown coloured cap with a thin white rim that is created by remnants of the veil that produce small teeth like projections and pale gills. The gills are used to distinguish *Hypholoma fasciculare* due to their sulphur green colour. The cap of this species may also have a yellow rim.

The smallest fungus found on the day was 1-3mm tall, growing on the fallen leaves of Blackwood (*Acacia melanoxylon*). Just about any wattle leaf inspected from the leaflitter had an abundant colony of the tiny fruiting bodies. *Torrendiella eucalypti* was one of the first Australian fungi described in Europe, according to Pat Grey.

Another tiny fungus was *Marasmius crinisequi* (Horse Hair Marasmius). This species grows to 40-50mm tall on an extremely slender stem (perhaps 0.5mm) amongst leaflitter and forest debris. The light grey/brown cap is 2-5mm, and as with many of the very small fungi, the gills are visible through the cap, either directly (opaque cap) or as striations where they form ridges. Many small fruiting fungi (eg *Mycena*) also have widely spaced gills, and *Marasmius crinisequi* has gills attached to a collar surrounding the stem. This species (if you can see it) when observed through a lens has a slight depression in the centre of the cap, that has a pyramid like point in the middle.

Growing amongst lichen and mosses on an embankment on the side of the track, the small bright yellow/brown *Lichenomphalia* (formerly *Omphalina spp)* are unmistakable. Growing to 40mm high with distinct concave upturned caps and wide decurrent gills, they can occur in large groups. Often seen around Bendigo, this group of fungi grow only on lichen and sometimes moss covered areas, and are reasonably rare through the wetter forests around Blackwood. The slope of the embankment prevented litter accumulation, allowing lichens and mosses to occupy the soil surface, and provided suitable habitat for

Lichenomphalia. Other parts of the forest with abundant understorey, and dense leaflitter from canopy trees has excluded this habitat niche. Where soil crusts, lichens, and mosses are more numerous, such as throughout the Box Ironbark forests, this fungus is more commonly seen.

The importance of the fungi (of various forms) to the wider ecosystem cannot be understated. It has been estimated that nearly all plants have mycorrhizal relationships with fungi (Atlas and Bartha 1995), essential to their survival. By harnessing and cycling otherwise unavailable soil minerals and nutrients, including increasing water availability, and promoting plant health and resistance to soil pathogens (Vernes 2007), plant root and fungi relationships facilitate ecosystem functions. In many cases mycorrhizal fungi (literally meaning 'fungus-root' (Claridge 2006) are particular to different genera and species of plants (Bougher 2007), while others are generalist associating with a range of plant groups. Many of the macrofungi described above have these mycorrhizal associations including also the diverse group of below ground fruiting truffle like fungi. Macrofungi also include many saprophytic decomposers (some described above). It is estimated that 'about 700 species of named fungi have been recorded as mycorrhizal with *Eucalyptus* in Australia so far' (Bourgher 1995, and subsequent records in Tommerup and Bourgher 2000). This has prompted the revegetation industry to investigate the use of mycorrhizal fungi in revegetation projects and direct seeding, to increase success rates. Products such as 'Wattle Grow' have now been released, but target a small proportion of the enormously diverse relationships between plants and fungi.

Fungi also provide an important food source to many mammals and perhaps reptiles, including *Antechinus, Sminthopsis, Isoodon, Perameles, Cercartetus, Trichosurus, Aepyprymmus, Potorous, Macropus, Petrogale, Thylogale, Wallabia, Pseudomys, Melomys, Rattus*, (Vernes 2007) and *Tiliqua* (Goonan pers obs). The bettong and potoroo are well recognized mycophagists (fungi eating) and rely on underground fruiting species similar to truffles for a large part of their diet. This has lead to the suggestion that mammals may play an important role in the distribution of certain mycorrhizal fungi, assisting their interaction with plants. Spores are passed through the digestive track unaffected and are deposited in a new location. The widespread loss of mammal fauna, particularly the small and medium size groups such as bettong, potoroo, and bandicoot that were abundant diggers and leaflitter turners, has important implications for ecosystems in our parks and reserves. Their diggings have been demonstrated to provide important entry points for both mycorrhizal fungi and water from rainfall to otherwise hydrophobic soils, particularly woodlands in lower rainfall climates. See Vernes (2007) and Tommerup and Bougher (2000) for a detailed and fascinating discussion.

Remarkably, some ants and wood beetles actively grow, transport, feed, and feed on fungi. The insects have structures designed to carry spores to new locations, are able to control temperature conditions in burrows to optimize fungal growth, fertilize the fungi by feeding it partly digested masticated wood, and in turn, the ants and beetles feed on the fungi and the secretions they produce. When the insect leaves the particular site, the fungi may overgrow the location and die because it is relatively unsuited to the environment without active climate control from an insect, it is not competitive with other fungi, or able to feed and grow without fertiliser supplements (Atlas and Bartha 1995). Although the reference used here is North American, some of the insect and fungi used as examples have representative groups and orders in Australia including the diverse termites.

Fungi can also cause large scale disruptions to ecosystems and some are well known to have dramatic effects on cropping and horticultural industries, although these are not often species within the macrofungi group. Cinnamon Fungus (*Phytophthora cinnamomi*) is perhaps one of the better known fungi (soil pathogen)

that can affect healthland vegetation, causing widespread decline. *Armillaria luteobubalina* has a large yellow/brown coloured fruiting body with a prominent annulus (ring on stipe below gills). The top third of the stipe (stem) may be white, the cap and stipe may also have numerous small and medium lumps respectively. This marofungus is a parasitic species, associated with eucalypts (Fuhrer 2001), and may cause health decline in affected trees and potentially death (A. Pouliot pers comm.). *Amanita muscaria* formerly thought to be only mycorrhizal with *Pinus spp* has now been found in Tasmania growing in association with the cool temperate rainforest tree *Nothofagus,* and has the potential to become a disastrously weedy fungi (A. Pouliot pers comm. and P. Grey pers comm.).

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• Tommerup I. C. and Bougher N.L.(2000) The role of ectomycorrhizal fungi in nutrient cycling in temperate Australian woodlands. In R.J Hobbs and C.J Yates (2000) *Temperate Australian Woodlands in Australia.* Surrey Beatty and Sons: Chipping Norton, NSW.

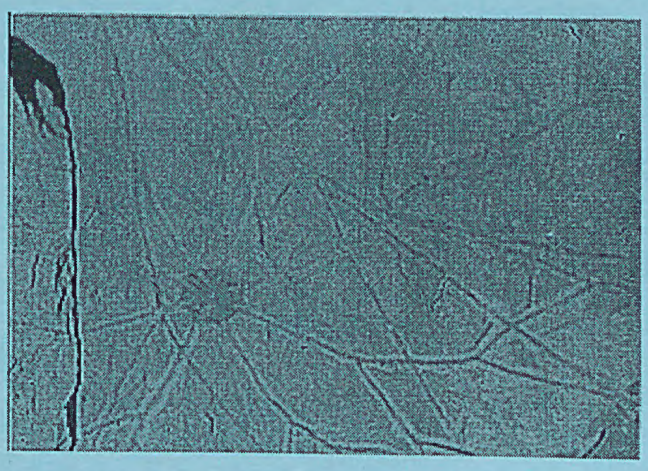
• Vernes K. (2007) Are diverse mammal communities important for maintaining plant-fungal associations and ecosystem health? *Australasian Plant Conservation* 15(4)16-17.

Personal Communications
Pat Grey FNCV Fungi Group
Alison Pouliot, Fungi Workshop.

Team work, Henny gives Cynthia a foot hold to complete the shot.
(photographer: Gemma Candy)

Did you know...that Bendigo (along with the former East Germany) is the best location to find graptolites?

Below is a photo of a local graptolite, (*Orthodigraptus robbinsi*), named after one former club member...an interesting and controversial story...



Diary

The General, Bird Observers Group and Fauna Study Group meetings are held at the Golden Square Senior Citizens Building, Old High Street, Golden Square, unless otherwise indicated.

General Meetings

Wednesday, August 8 **7.30pm**
Paul Foley: 'Interactions between the terrestrial and extraterrestrial environments'. Paul is an astronomer who lives locally. His regular articles on aspects of astronomy, 'Beyond Earth', are published in the Bendigo Miner.

Wednesday, September 12 **7.30pm**
AGM. Glenise Moors will speak about…her choice of topic.

Excursions

The next club excursion is on **August 18**. Please see page 3 for the latest update.
Contact Richard Goonan if you plan to attend or have any questions (ph 0423418815).

For the Regent Honeyeater project weekend planting, **August 11-12**, please see page 3.

Fauna Group

This group meets (in the clubrooms) on the fourth Wednesday of the month at 7.30pm.

Wednesday, August 22 **7.30pm**
Topic of the night to be advised.

Fauna Excursions

Every Friday morning starting at around 9 to 9:30, the Fauna Group inspects nest boxes in the Spring Gully area. The excursions are led by Maurie Lewis, 16 Vains St. Golden Square. Phone 0407 427 179 or 5442 1813. Phone Maurie to confirm exact departure times and location. If you don't phone but go directly to Maurie's house and find nobody at the house between 9 and 9:30 then the excursion is not on.

Wildlife Rescue & Information Network Inc.

W.R.I.N. is an organisation dedicated to the care of orphaned, sick or injured native animals. It is fully endorsed by the Dept of Sustainability and Environment.
Please call our Emergency Number for Help for Fauna in Need. Phone: 0419 356433.

Bus trip to Cranbourne Native Botanic Gardens – Sunday 21st October

See page 4 for details

An interesting seminar series

The Centre of Environmental Management (University of Ballarat, Mt Helen Campus) in conjunction with DSE present a varied and interesting seminar program. The contact person is S.K. Florentine and he can be reached at s.florentine@ballarat.edu.au or phone 5327 9231.
24 August, speaker: Dr David Cameron
Topic: The conservation status of Victorian Flora: the recent IUCN based review and case studies.

SEANA Spring Camp

Friday 5th - Sunday 7th October 2007
hosted by Peninsula Field Naturalists Club
at 'The Briars' Park, Nepean Hwy, Mt Martha
Deposit of $30 now due, balance by 31 August.

SEANA Autumn campout 7 - 10 Mar 2008 Naracoorte Caves NP – 1st Notice

Attractions include Caves, rare fossils, viewing southern bent-winged bat wintering colony plus botany, bird and geology tours.
Registration and deposit of $30 to be paid by 20 September.
Total cost probably under $125 includes 3 catered dinners & caves guides.

Anne Bridley (54493479) has further details

'A Climate of Change' Conference 7-9 Sept. at Rawson Village, Walhalla. The Conference is organised by the Victorian Environment Friends Network.
Phone Maelor Himbury 9374 1902 or e-mail maelor@melbpc.org.au